**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF OKLAHOMA**

VOICE DOMAIN TECHNOLOGIES, LLC,	)	
	)	
Plaintiff,	)	CASE NO. CIV-08-701-HE
	)	
v.	)	
	)	
PHILIPS ELECTRONICS NORTH AMERICA	)	
CORPORATION, OLYMPUS AMERICA INC.,	)	
and OLYMPUS IMAGING AMERICA INC.	)	
	)	
Defendants.	)	
	)	

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TABLE OF CONTENTS

TABLE OF AUTHORITIES

CASES

STATUTES

PLAINTIFF'S MEMORANDUM IN SUPPORT
OF ITS PROPOSED CLAIM CONSTRUCTION

PRELIMINARY STATEMENT

This patent infringement case concerns three patents: U.S. Patents 5,548,566 ("the '566 patent")(Ex. 1)[1]; 5,818,800 ("the '800 patent")(Ex. 2); and 6,281,883 ("the '883 patent")(Ex. 3). All three patents relate to dictation technology. The '566 and '800 patents are related by a common parent application with an April 6, 1992 priority date. The '883 patent is derived from an independent application with a March 10, 1993 priority date, which is also one of the priority applications to the '800 patent.

The inventions in this case provide an improved and user-friendly interface of dictation technology and modern computers. The '566 patent provides for a portable dictation recorder that allows a user to dictate text while carrying the device, and then rapidly download the dictation into a voice processing computer. The '800 patent provides for a dual-mode dictation device. The user can use the device in a "portable mode" where the user dictates into the device while carrying it, and the dictation is stored in the device to be later transferred to a voice processing system. The user can also use the device in a "local mode" by linking it to a voice processing system for which the device then becomes an input peripheral for controlling the computer. The '883 patent concerns a handheld computer peripheral that contains a device for controlling the position cursor of the computer and, in addition, contains separate buttons for notifying the computer when the spoken input is dictation text to be recorded in the memory and when the spoken input is a command or instruction which is not to be recorded or transcribed as text.

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[1]   The reference to "Ex." refers to the number of the exhibit to the Jordan Declaration submitted with this brief.

The terms in the claims of the patents-in-suit are not overtly difficult. Indeed, they are for the most part common English words and common terms used in connection with computer hardware and software.

I.   THE LAW OF CLAIM CONSTRUCTION

The construction of a claim is a question of law. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). A claim construction is reviewed by the Federal Circuit *de novo* entirely as a question of law. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448 (Fed. Cir. 1998). The claims of a patent are of critical importance in any patent infringement action, because it is the claims of a patent that define the invention and the scope of the patentee's rights. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005).

While there have been numerous Federal Circuit cases since *Markman* addressing the standards for construing a claim, the Federal Circuit's *en banc* decision in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005), provides an encyclopedic statement of the law.

Under *Phillips*, a claim term is given its ordinary and customary meaning that the term would have had to a person of ordinary skill in the art at the time of the invention. *Id.* at 1312-1313. Consistent with earlier case law, the Federal Circuit in *Phillips* emphasized that the primary source of construing claims should be "intrinsic evidence," consisting of the claims themselves, the patent specification, and the file history. The understanding of a person of ordinary skill is not considered in the abstract, but rather in the context of the patent specification and file history. In that regard, the Federal Circuit has stated:

> Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.

Id. at 1313.

Thus the court starts the decision making process by reviewing the same resources as would that person, *viz.*, the patent specification and the prosecution history.

Id. at 1313. (internal citations omitted).

The Federal Circuit in *Phillips* considered the specification of principal importance in construing claims, stating: "as we stated in *Vitronics*[2], the specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id*. at 1314.

The Federal Circuit also held that "a court should also consider the patent prosecution history if it is in evidence . . . [t]he prosecution history, which we have designated as part of the 'intrinsic evidence,' consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent." *Id*. at 1317. (internal citations omitted).

The claim language itself also provides substantial guidance to the meaning of the claim terms. *Id*. at 1314.

As a second tier of evidence, the Federal Circuit allowed consideration of "extrinsic evidence," which consists of "all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Id*. at 1317.

In particular, the Federal Circuit invited consideration of technical dictionaries and treatises as useful in claim construction, stating:

> Within the class of extrinsic evidence, the court has observed that dictionaries and treatises can be useful in claim construction. We have especially noted the help that technical dictionaries may provide to a court to better understand the underlying technology and the way in which one of skill in the art might use the claim terms.

Id. at 1318. (internal citations omitted).

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[2]   *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

The Federal Circuit noted, however, that "while extrinsic evidence can shed useful light on the relevant art, we have explained that it is less significant than the intrinsic record in determining the legally operative meaning of claim language." *Id*. at 1317. (internal citations omitted).

The application of these claim construction rules and other principles discussed below support the plaintiff's proposed claim construction in this case.

II.   THE CLAIMS OF THE PATENTS-IN-SUIT ARE NOT MEANS-PLUS-FUNCTION CLAIMS

The main area of dispute between the plaintiff and defendant in this case is whether certain claim elements are written in a unique "means-plus-function" format provided by 35 U.S.C. § 112 ¶ 6. A claim element in the means-plus-function style is defined in terms of the function it performs, with no reference to any structure or "means" for achieving that function. Although such an element would therefore seem to encompass every structure that implements the specified function, § 112 ¶ 6 limits the element's scope to the particular structures disclosed in the patent for performing the function as well as equivalent structures. 35 U.S.C. § 112, ¶ 6. In this case, Philips hopes to limit the scope of Voice Domain's claims by characterizing them as means-plus-function claims.

As the Federal Circuit has observed, it is ordinarily not difficult to determine whether a claim element triggers § 112, ¶ 6 because claim drafters typically use the generic preface – "a means for" – when they intend to invoke § 112, ¶ 6:

> The question whether a claim element triggers section 112(6) is ordinarily not a difficult one. Claim drafters conventionally use the preface 'means for' (or 'step for') when they intend to invoke section 112(6), and there is therefore seldom any confusion about whether section 112(6) applies to a particular element.

Greenberg v. Ethicon Endo Surgery, Inc., 91 F.3d 1580, 1583 (Fed. Cir. 1996).

Thus, if the claim element contains the phrase "means for" followed by a function, the Courts will presume that the element is a "means-plus-function" element and if it does not include the word "means," the presumption is that it is not a means-plus-function claim element. As the Federal Circuit held in *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004):

> [T]his court's precedent provides that '[a] claim limitation that actually uses the word 'means' invokes a rebuttable presumption that § 112 ¶ 6 applies. By contrast, a claim term that does not use 'means' will trigger the rebuttable presumption that § 112 ¶ 6 does not apply.'

The Court emphasized moreover, that "the presumption flowing from the absence of the term 'means' is a strong one that is not readily overcome." *Id.* *See* also *Al-site Corp. v. VSI International, Inc.* 174 F.3d 1308, 1318 (Fed. Cir. 1999); *Phillips*, 415 F.2d at 1311.

A claim element can employ functional language without invoking the limitations of §112 ¶ 6 if it also in some way connotes a type of structure. In *Greenberg*, 91 F.3d 1580 (Fed. Cir. 1996), the Federal Circuit reversed the district court's claim construction of the term "dedent mechanism" as a means-plus-function term. The court held that defining a claim element in functional terms, without using the phrase "a means for," is not sufficient to convert a claim element into a "means-plus- function element," because many devices are commonly described in functional terms. 91 F.3d at 1583.

A functional name for a structure could also include an unlimited number of different types of structures without invoking § 112 ¶ 6. In *Lighting World, Inc.*, the Federal Circuit reversed the district court's holding that a claim term "a connector assembly" was a means-plus-function element. The district court had considered the term as encompassing many different possible devices and therefore considered it to be only a functional term. In reversing, the Federal Circuit held:

> In considering whether a claim recites sufficient structure to avoid application of §112 ¶ 6, *we have not required the claim term to denote a specific structure.* Instead, we have held that it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, *even if the term covers a broad class of structures and even if the term identifies the structures by their function.*

382 F.3d at 1359-1360 (emphasis added).

A claim element can convey sufficient structure to avoid §112 ¶ 6 with a single word or phrase. For example, in *Personalized Media Communications, LLC v. International Trade Commission*, 161 F.3d 696, 699, 704 (Fed. Cir. 1998), a claimed television receiver included a "digital detector" element. The specification did not describe any circuitry for the digital detector, and the figures in the patent showed the digital detector merely as a functional block. The court concluded that the element did not invoke § 112 ¶ 6 because the word "detector," unlike the word "means," is not a generic term that offers no hint of any structure; the word "detector" connotes structure, even though it does not identify a specific structure:

> The 'digital detector' limitation does not use the word 'means' and therefore this limitation is presumed not to invoke §112, ¶ 6. . . . 'Detector' is not a generic structural term such as 'means,' 'element,' or 'device'; nor is it a coined term lacking a clear meaning such a 'widget' or 'ram-a-fram.' Instead, as noted by the ALJ by reference to dictionary definitions, 'detector' had a well known meaning to those skilled in the electrical arts connotative of structure, including a rectifier or demodulator. . . . Moreover, neither the fact that a 'detector' is defined in terms of its function, nor the fact that the term 'detector' does not connote a precise physical structure in the minds of those of skill in the art detracts from the definiteness of structure. [citation omitted]. Even though the term 'detector' does not specifically evoke a particular structure, it does convey to one knowledgeable in the art a variety of structures known as 'detectors.' *Id*. at 704. (Internal citations omitted)

Similarly, in *Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364 (Fed. Cir. 2003), the court rules that several claimed "interface circuit" elements – that were defined in solely terms of how they functioned – did not invoke §112 ¶ 6 because the word "circuit" was understood by those skilled in the art to mean structures having "the combination of a number of electrical

devices and conductors." *Id.* at 1372. *See also Envirco Corp. v. Clestra Cleanroom, Inc.*, 209

F.3d 1360, 1364 (Fed. Cir. 2000).

Here, none of the claims in issue use the phrase "a means for" in describing any

limitation of the claims. Instead, the claims are drafted in the traditional structural terms, using

common terms to identify well-known structures in the electronic art, and should be subject to

the ordinary rules of claim interpretation.

III.   THE CLAIMS OF THE '566 PATENT

Claim 1 of the '566 patent contains all of the terms in dispute, which are shown in bold:

> A **portable voice recording device** comprising: a microphone for generating an
> electrical signal representative of an acoustic speech signal, memory device for storing a
> memory signal representative of said electric signal, and an output port controller for
> transmitting said memory signal to a **voice processing computer** device at a rate
> substantially more rapid than the rate at which said electrical signal was generated.

A.   Portable Voice Recording Device

Plaintiff's proposed definition of the term "portable voice recording device" is "a device

that is capable of being carried by a user while recording the user's voice."

The '566 patent specification is clear that the recording device of the '566 patent is not

merely one that is transportable from one location to another with some degree of effort, but is a

device that one could carry and use to make recordings at the same time.   The patent

specification states: "In another aspect, the invention includes . . . a chassis having a size and

shape which allows the chassis to fit in a user's hand" (Ex. 1, col. 1, lines 50-53). The nature of

the device is further shown in Figure 1A and 1B of the '566 patent which is described as an

illustration of a handheld dictation recording device. (Ex. 1, col. 1, lines 61-62).

B.   Output Port Controller

The plaintiff's construction of "output port controller" is: "hardware and/or software that

operates as an interface between the device's memory and the device's output port which is

capable of transferring a file comprising a voice recording from the device's memory to a voice processing computer."

The claim phrase – "output port controller" – indicates that the claim element is directed to a structure known as a "controller" for controlling another structure, an "output port." The specification uses the term output port controller to refer to structures. (Ex. 1, col. 1, lines 44-47) The '566 patent has an example of an output port controller – a serial port controller – that works in connection with the main device controller. (Ex. 1, col. 5, lines 26-32).

The '566 patent specification also describes a controller, in another context, stating: "more specifically, the controller includes a central processor unit (CPU) and a memory. The memory stores a program which is executed by the CPU to direct the operation of the recording device." (Ex. 1, col. 2, lines 39-43) Fig. 2, item 40, shows the controller consisting of a CPU and memory (Ex. 1, col. 2, lines 35-41).

Accordingly, the specification confirms that the claimed output port controller refers to known hardware and related software which operates as an interface between the device's memory and the device's output port. The extrinsic evidence below confirms this as well.

The term "controller" is well recognized in the computer industry as referring to known processing devices that control certain operations, and the use of the term controller in the patent is consistent with the ordinary meaning in computer and electronic arts. A computer textbook, *Computer Science: An Overview* (10th edition), Glenn Brookshear (2009) Pearson Education Inc, p. 105 (Ex. 4), explains that the term controller refers to well-known electrical structures:

> Communication between a computer and other devices is normally handled through an intermediary apparatus known as a controller. In the case of the personal computer, a controller may consist of circuitry permanently mounted on the computer's motherboard or, for flexibility, it may take the form of a circuit board that plugs into a slot on the motherboard. . . . [a] controller translates messages and data back and forth

between forms compatible with the internal characteristics of the computer and those of the peripheral device to which it is attached.

Technical dictionary definitions also support the plaintiff's construction. For example, the word "controller" is defined in an online dictionary of computer terms as follows:

> (k&n-trōl´er) (n.) A device that controls the transfer of data from a computer to a peripheral device and vice versa. For example, disk drives, display screens, keyboards, and printers all require controllers. In personal computers, the controllers are often single chips.

http://www.webopedia.com/TERM/c/controller.html. (Ex. 5) *See also* http://www. computerhope.com/jargon/i/iocont.htm (Ex. 6), defining "Input/output controller":

> The input/output controller is a device that interfaces between an input or output device and the computer or hardware device. The input/output controller on a computer is commonly located on the motherboard. However, an I/O controller can also be an internal add-on . . . .

See also Electronics Dictionary, (5th Edition) (1994), McGraw-Hill, Inc., "control," p. 114. (Ex. 7).

Defendant Philips and its parent or affiliate companies' own patents also demonstrate that a "controller" is a well-known structure in the electronics art. Philips patents use the term "controller" in the context of electronic devices throughout the specifications and claims. (*See e.g.* Ex. 8). (Ex. 9 is the first page of a printout of patents recovered from the USPTO website with a search for the term "controller" and the assignee name "Philips." There were over 2000 hits for Philips patents using the term controller since 1976.)

Thus, the output port controller claim limitation is not a "means-plus-function" claim element, as the defendant contends. The words "means for" do not appear in the element, and the term "controller" refers to well-known structures, and not merely to a function performed by an unspecified "means."

The absence of the means-plus-function claim language and the existence of structure in the claim precludes construing this term as a means-plus-function claim as defendant seeks to do.

C.   Voice Processing Computer

Plaintiff's construction of the term voice processing computer is "a computer that includes software and hardware for analyzing a voice input (such as speech recognition) and/or modifying the voice input." Defendant does not contend that this element is a means plus function element.

The patent specification supports the plaintiff's construction of the term "voice processing computer" by stating that the computer device which receives the dictation downloaded from the portable voice recorder would be able to perform further analysis or manipulation of the voice recording. For example, the '566 patent specification states:

> [T]he output signal is rapidly transmitted to a speech recognition device which analyzes the output signal and automatically prepares a printed transcript of the dictation. (Ex. 1, col. 1, lines 30-36)

IV.   THE '800 PATENT TERMS

Claim 1 of the '800 patent contains most of the claim terms in that patent which require construction:

> A **portable voice storage peripheral** comprising: a microphone for providing **a microphone signal representative of a user's voice,** a memory device, a **position transducer** for providing a **position signal** in response to a user's actuation of said position transducer, **a controller having a portable mode and a local mode** of operation, wherein during said portable mode of operation, said controller stores in said memory a memory signal representative of said microphone signal commencing at a location in said memory identified by said position signal, and during said local mode of operation, said controller provides said microphone signal, said memory signal and said position signal to a **remote voice processing system** for controlling said processing system.

A.   **Portable Voice Storage Peripheral**

The plaintiff's construction of "a portable voice storage peripheral" is "a computer

peripheral that, when used in a portable mode, is capable of being carried by the user while

recording and storing voice recordings." As in the '566 patent, the '800 patent also emphasizes

that the portable device is one that could be used as a practical matter to record while being

carried by the user, and the specification further illustrates and describes the device as a

"handheld" peripheral. (*See* Ex. 2, Fig. 1; col. 2, lines 18-19).

A "peripheral" is a well-known term in computer art and refers to a device which

provides communication or inputs into the computer. The Merriam-Webster online dictionary

(Ex. 10) defines peripheral as "a device connected to a computer to provide communication (as

input and output) or auxiliary functions (as additional storage)."

B.   **Position Transducer And Position Signal**

The plaintiff's construction of the term position transducer is as follows: "a user input

device such as a switch, set of switches, trackball or joystick which, - when actuated by the user

during the portable mode, emits an output which notifies the controller of a logical position in

the peripheral's memory for storing a recording of the user's voice, and- when actuated by the

user during the local mode, emits an output which is forwarded to the remote voice processing

system for controlling the user's position input to the remote voice processing system.

The position transducer is a switch or input device (*e.g.* a trackball) – *i.e.* a transducer

that the user operates to provide a "position" input, for example, to select a position in the

recording, or move the cursor on a display screen. The position signal, as plaintiff construes the

term, is the output emitted by the position transducer during the portable and local modes of

operation for implementing the user's position inputs.

The word "transducer" is a common term that refers to a device that generates an electrical signal representative of a physical condition such as the pressure or motion applied to a button or switch. For example, Webster's *New World Computer Dictionary* defines "transducer" as:

> a device that converts a detectable physical phenomena such as sound, pressure, or light, into electrical signals that can be processed by a computer. (Ex. 12, Webster's *New World Computer Dictionary* (10th edition), Brian Pfaffenberger (2003) Wiley Publishing Inc.)

A Philips' patent U.S. Patent No. 3,976,899 (issued August 24, 1976) describes "[a] mechanical-electrical transducer producing an electric signal upon depression of a spring, such as a push-button." (Ex. 13A, '899 Abstract) That patent throughout recognizes that a transducer refers to known physical structures – such as buttons, keypads and the like – that translate an action into electrical signals.

The '800 patent specification plainly defines "transducer" in accordance with its ordinary meaning by describing examples of transducers – structures, including pointing devices such as a trackball or joystick, or "buttons." It states:

> Figure 1 illustrates a handheld input peripheral **10** according to the invention. The input peripheral includes a microphone **12** for receiving a person's voice; a pointer device **14** (such as a trackball or joystick); a pair of buttons **16**, **18** (*e.g.*, electromechanical switches, membrane switches *or any similar type of transducer* known to those skilled in the art); . . . the user can easily operate transducers **14**, **16**, and **18** with his right hand without obstructing the bar graph display **22** or loudspeaker. (Ex. 2, col. 2, lines 18-31) (emphasis added)

In the portable mode of operation, the user's position input notifies the controller of a logical position in the peripheral's memory for storing a recording of the user's voice. For example, in the embodiment described in the '800 patent specification, a position transducer called a "pointer" selects a location within the recordings stored in the peripheral (Ex. 2, col. 2, lines 52-60):

To listen to the recording, the user pulls the pointer 14 downward with his thumb. The peripheral responds by gradually moving a cursor **26** from the top of the illuminated portion **24** of the bar graph **22** downward into the body of the illuminated portion until the user releases the pointer. Thus, by moving the cursor and watching the display bar **22**, the user selects the location within the recording. For example, if the cursor is in the middle of the illuminated portion, it identifies the middle of the recording.

In the local mode of operation, the position transducer input is forwarded to the remote voice processing system, and for example, controls the cursor movement on the system display screen. The '800 patent specification states:

> The peripheral can also be used to navigate the computer's graphic interface using the pointer **14**, buttons **16, 18**; and microphone **12**. For example, to modify a document, the user manipulates pointer **14** to thereby move the 'cursor' on the computer display screen . . . This eliminates the need for 'a separate cursor control mechanism.' (Ex. 2, col. 3, lines 48-57).

Thus, the plaintiff's proposed construction of the claim term "position transducer" is consistent with the common meaning of the word transducer and is literally supported by the specification and the claim language both of which describe the two functions of the portable mode and local mode in the same terms as the plaintiff's proposed definition.

The file history of the '800 patent further supports the plaintiff's construction of the term "position transducer." In a response and amendment dated September 15, 1997, at page 7, the applicant explained the function of the position transducer to the Examiner:

> During the portable mode of operation, the controller stores the microphone signal in the memory of the portable device at a location identified by *the position transducer.* . . . For example, if a user desires to insert a new voice recording in the middle of a previous recording, *he manipulates the position transducer* to identify the desired location. . . . Similarly, the user can *manipulate the position transducer* to select other desired locations such as at the end of any prior recording. (emphasis added) (Ex. 14, at V00807).

The applicant continues:

> Thus, the microphone and position transducer serve dual purposes. During portable mode, they control the portable voice storage peripheral as stated above. During local mode, they control a remote voice processing system. (Ex. 14, at V00808).

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The defendant's contentions that the element "position transducer" is a means-plus-function element is baseless. First, the "means for" language that triggers a means-plus-function construction is not used, and therefore the presumption is that the term is not a means-plus-function element in accordance with the above discussed case law discussed in Point II, *supra*. Second, the claim includes structure by referencing a transducer, which is a well-known electrical structure in the computer art, as defendant's own patents acknowledge. (*See* Ex. 13.)

As the Federal Circuit has noted in similar cases, a claim element that uses a known term of art that connotes a type of structure such as "circuit", "digital detector", or connector" cannot be deemed a means-plus-function element subject to § 112, ¶ 6. *Apex Inc.*, 325 F.3d at 1372 (Fed. Cir. 2003); *Lighting World Inc., supra*, 382 F.3d at 1359-60.

C.   Controller Having A Portable Mode And A Local Mode

The plaintiff's construction of this element is "Hardware and/or Software for implementing the functions performed by the device in the portable mode of operation and in the local mode of operation."

The term "controller" has been discussed in connection with a controller of the output port controller of the '566 patent. The controller of claim 1 of the '800 patent controls the operation of the dual mode recorder, and implements the selection of the portable mode or the local mode.

As shown in the '800 patent specification, the controller is a structure. *See* Fig. 4, which shows a controller **60** including a CPU and a memory. It is described in col. 4, lines 50-67:

> FIG. **4** is a block diagram of the components of a universal voice input peripheral such as depicted in FIGS. **1-3**. A controller **60** monitors the status of buttons **16, 18**; pointer **14**; and local/portable mode switch **84**. The status of the local/portable mode switch **84** indicates whether the peripheral is in the local or portable mode.

> The controller **60** includes a central processor unit (CPU) **62** and a memory **64**. The memory stores a program which is executed by CPU **62** to operate the peripheral.

The controller element of the claims of the '800 patent is also not a means-plus-function element as defendant contends for the same reasons as discussed above. First, the "means for" language is not used, giving rise to the presumption that it is not a means-plus-function claim. Second, the element includes structure – a controller – which is known in the art to refer to a structure as shown in the above cited references, and is shown to be a structure by the diagram of the internal structure of the device, Fig. 4, item 60.

D.   A Remote Voice Processing System

The plaintiff's construction of the term "remote voice processing system" is essentially the same as the construction of the term in the '566 patent, "voice processing computer." The plaintiff's construction is: "a device that is external to the peripheral and is capable of analyzing a voice input (such as for speech recognition) and/or modifying the voice input."   The slight change in wording – from "computer" to "system" did not work a substantive change in meaning.

E.   Command Button And Command Notification Signal

Dependent claim 6 of the '800 patent introduces two new terms, "command button" and "command notification signal." The claim states in full:

> The portable voice storage peripheral of claim 5 further comprising:
> **a command button** for providing a **command notification signal** indicating whether said command button is asserted, wherein:
> during said portable mode, said controller, in response to said command notification signal, interprets said microphone signal to detect spoken commands, and during said local mode of operation, said controller provides a signal to said processing system indicating that said command button is asserted.

The plaintiff's definition the term "command button" is "a user actuated device which, when actuated by a user, emits an output which indicates that the voice input is a command or instruction". The function of the "command button" is thus to indicate that what the user speaks into the microphone after the command button is activated is not dictation to be recorded, but

rather an instruction or a command. The "command notification signal" is simply the output

generated when the command button is actuated by the user. In the portable mode, the signal is

directed to the peripheral itself, and in the local mode, the signal is directed to the voice

processing system. (Ex. 2, col. 6, lines 7-11).

The patent specification describes the command button in accordance with the proposed

construction. The '800 specification gives an example of how the command button operates.

(Ex. 2, col. 3, line 66 - col. 4, line 9).

Other portions of the specification again make clear that the command button sends a

signal to indicate that the microphone input is a command, and not dictation for storage as data:

> As demonstrated above, the command button **18** assures that the computer does
> not confuse commands such as 'cut' or 'paste' for words to be added to a document.
> (Ex. 2, col. 4, lines 23-26).

Defendant has not offered a construction of command button in its proposed terms, and

has not contended that this element is a means plus function element.

F.   Record Button And Data Notification Signal

Dependent claim 7 introduces the terms "record button" and "data notification signal".

The claim states:

> The portable voice storage peripheral of claim 2 further comprising a **record
> button** supported by said chassis at a position in the vicinity of a user's finger when said
> user is holding said handle portion, for providing a data notification signal indicating
> whether said record button is asserted, and wherein:
> during said portable mode, said controller, in response to said data notification signal,
> stores said memory signal in said memory, and
> during said local mode of operation, said controller provides a signal to said processing
> system indicating that said record button is asserted.

The "record button" is defined by the plaintiff as "a user actuated device which, when

actuated by a user, emits an output which indicates that the voice input is data to be recorded."

The "data notification signal" is the output generated when the record button is asserted,

instructing the system that the microphone input should be recorded in memory as data. (Ex. 2, col. 3, lines 24-34).

The '800 patent specification provides a description of the "record button" in accord with the proposed construction:

> To record dictation directly into the computer's memory, the user asserts the record button **16** and begins speaking into the microphone. (Ex. 2, col. 3, lines 25-27). (*See also* Ex. 2, col. 2, lines 41-43)

Defendant has not offered a construction of "record button" and has not contended that this element is a means plus function element.

G.   Spoken Commands

Defendant has requested a construction of the term "spoken commands." This phrase is taken from the language of claim 6 which states "during said portable mode said controller, in response to said command notification signal, interprets said microphone signal to detect spoken commands." Defendant proposes a construction of spoken commands in isolation, as meaning "Speech that triggers the controller to execute an operation specified by the content of the speech." (Ex. 15).

Defendant's construction misses the point of operation of the command button. It is clear from the context of the claim that one asserting the command button is giving a signal to the device that the words spoken into the microphone after the assertion of the command button are to be treated as commands, and not as dictation to be added to the recorded data. Thus, the words "interprets said microphone signal to detect spoken commands," when read in context, refers to speech input when the command button has been asserted, and needs no construction.

V.   THE '883 PATENT

Claim 1 of the '883 patent contains all but one of the terms that need construction. Claim 1, with the terms to be construed shown in bold, states:

A data entry system comprising a **handheld peripheral** and a processing system, wherein said handheld peripheral comprises: a microphone for providing a microphone signal representative of a user's voice, **a voice command button** for providing **a command notification signa**l indicating whether said voice command button is asserted, **a voice data butto**n for providing a **data notification signal** indicating whether said voice data button is asserted, **a cursor position transducer** for providing a cursor signal representative of a desired cursor position on a display screen of said processing system, and a coupling mechanism for providing said microphone signal, said command notification signal, said data notification signal, and said cursor signal to said processing system; and wherein said processing system comprises: said display screen, and **microphone interpretation mechanism** which, in response to said command and data notification signals, determines when said microphone signal represents command and when it represents data.

A.   Handheld Peripheral

The term "peripheral" has been defined previously in connection with the '800 patent, and the same definition applies here for the same reasons.

The adjective "handheld" modifying the word "peripheral" is a common English word that means capable of being held in a hand. *See* Merriam-Webster online dictionary (Ex. 16). The fact that the handheld device is intended to be capable of being held in a single hand is shown in the '883 patent specification by the drawings illustrating examples of the device, Figure 1 and Figure 3. In the patent prosecution history, the applicant described the hand held device as including: "a chassis having a handle portion which is shaped to fit in a user's hand." (Ex. 12 at V00307-308).

B.   Voice Command Button

The plaintiff's construction of the term "voice command button" is "a user actuated device that when actuated by the user, emits an output indicating that the voice input is a command or instruction."

The '883 patent specification explains that the voice command button signals the voice processing system that the words spoken after the voice command button is asserted are intended to be commands or instructions, rather than dictation. (Ex. 3, col. 1, lines 37-41).

In the prosecution history of the '883 patent application, in the Second Preliminary Amendment, at page 5 (Ex. 17 at V00269-270), the applicant explained that with "the data entry system of claims 28-30, the user can promptly notify the processing system whether the voice should be treated as a command or as data using the command and record buttons."

Defendant does not propose a construction of the entire term, "voice command button," and instead offers a construction of "voice command" removed from the context referring to the particular button on the device. Defendant then defines "voice command" as "speech that triggers a computer to execute an operation specified by the content of the speech."

Defendant's definition is in error in two respects. By taking voice command out of the context of the phrase "voice command button," it provides no definition for the term describing a structure on the device – a voice command button. The removal of the word "button" from the phrase would leave undefined what that structure is.

Second, the defendant proposes a construction that is contrary to the patent's description of how the device works. "Voice command button" indicates that whatever is spoken after its activation is a command, and not data to be recorded. The activation of the voice command button treats what is spoken as a command or instruction regardless of the content of the speech.

C.   **Command Notification Signal**

The command notification signal is "the signal indicating that the voice command button has been actuated." As the '883 patent specification explains, the command notification signal is the signal generated by activation of the voice command button:

> Data entry device **40** also includes a voice command button **48** which, when asserted, causes the data entry device to transmit a voice command signal over cable **28** to notify the computer that the microphone signal represents a spoken command. (Ex. 3, col. 3, line 59 - col. 4, line 4).

D.   Voice Data Button

The "voice data button" is under plaintiff's construction: "A user actuated device, which

when actuated by the user, emits an output indicating that the voice input is data to be recorded."

The term "record button" is used in the specification for this button, but was changed in the

claims to "voice data button" in a claim amendment during prosecution[3].

The '883 patent specification clearly describes the voice data button consistent with this

definition: col. 2., lines 50 -60:

> To begin recording dictation, the user asserts the record button **26** and begins speaking
> into the microphone. Control switch buffer/amplifier **34** transmits a signal to the
> computer to indicate that the record button has been asserted . . . . In response, the
> computer begins storing digital samples of the microphone signal in a memory. (Ex. 3,
> col. 2, lines 50-60).

Defendant offers a construction of "voice data" in isolation from the full term, "voice

data button." It proposes a definition of "voice data" as "speech *other than* speech that triggers a

computer to execute an operation specified by the content of the speech." (Ex. 15) This

proposal suffers from the same defects as its proposed construction of the voice command

portion of the phrase "voice command button." Defendant's proposal does not provide a

construction of the voice data *button* and ignores its function.

E.   Data Notification Signal

The plaintiff construes the term "data notification signal" as the signal indicating that the

voice data button has been activated. This term describes the electrical signal initiated by the

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[3]   The equivalence of the terms "voice data button" and "record button" is shown by the file
history of the '883 patent. In an Amendment of the '883 patent application dated August
30, 1995, the applicant amended claim language in what is now claim 1 from a "record
button" to a "voice data button" and from "record signal" to "data notification signal."
(Ex. 17 at V00305). There was no comment on the change in the remarks and no
suggestion that any substantive change was intended.

actuation of the "voice data button" (or "record button") instructing the system to record the

microphone input as data. The '883 patent specification states that the "voice data button"

triggers a "data notification signal." (Ex. 3, col. 2, lines 50-60).

F.   Cursor Position Transducer

The plaintiff's proposed construction of "cursor position transducer" is "a user input

device such as a switch, set of switches, trackball or joystick which provides a signal for

controlling the cursor position on the display screen." The trackball or other cursor position

transducer on the handheld device essentially operates as a mouse[4].

The evidence previously cited shows that "transducer" refers to known structures in the

electrical and computer arts. The '883 patent specification uses the terms consistent with that

ordinary usage. *See e.g.*, Ex. 3, col. 2, lines 28-37 where the specification shows a trackball as

one type of transducer, but states that other types of transducers could be used:

> [T]he user can direct the cursor to a desired location on the computer screen by
> manipulating the track ball while viewing the screen. Other types of input transducers
> can be used to manipulate the cursor, such as well known cursor control keys.

For the same reasons as explained in connection with the term "position transducer," the

"cursor position transducer" is not a means-plus-function element.

G.   Coupling mechanism for providing said microphone signal, said command notification signal, said data notification signal, and the cursor signal to said processing system

This claim element "coupling mechanism for providing said microphone signal, said

command notification signal, said data notification signal, and the cursor signal to said

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[4]   During the prosecution of the '883 patent, in a Second Preliminary Amendment,
December 8, 1994, page 6, the applicant equated the cursor position transducer to a
mouse on a computer which is the well-known transducer for controlling cursors on desk
top computers. (Ex. 17 at V00270).

processing system" refers to the electrical connection that emits the various signals to the voice

processing system (computer). The claim element does not use the term "means for" and

instead, in the context of the electrical peripheral device, refers to circuitry for transmitting

signals to the processing system. The '883 patent specification describes this in col. 1, lines 62-

67 through col. 2, line 5, where it states:

> The chassis supports several input transducers **14-26** for receiving data and commands
> from the operator. A transmission cable **28** is connected between the data entry device
> and a processing device (herein 'computer'). The data entry device transmits data and
> command signals over the transmission cable to the computer. In an alternative
> embodiment shown in FIG. 4, 'the data entry device includes a radio transmitter **36** for
> transmitting the data and commands to the computer without the need for a transmission
> cable.'

As shown in *Greenberg v. Ethicon Endo Surgery*, 91 F.3d 1580 (Fed. Cir. 1996), the use

of "mechanism" does not necessarily invoke a means-plus-function interpretation of the element

if structure is included. *But see Welker Bearing Company v. PHD, Inc.,* 550 F.3d 1090 (Fed. Cir.

2008), where "the mechanism for moving to send finger" was construed as a means-plus-

function claim element, as the claim provided no structural context for determining the

characteristics of the mechanism. The term "coupling mechanism for providing said microphone

signals . . . to the processing system", by contrast, has a context of electrical connections which

are known structures, and not merely a function.

H.   Microphone Interpretation Mechanism

Claim 1 of the '883 patent includes a limitation providing for a "microphone

interpretation mechanism which, in response to said command and data notification signals,

determines when said microphone signal represents command and when it represents data."

This element recites the fact that the computer can recognize whether the voice data

button or the voice command button is asserted. The specification makes clear that the

recognition mechanism is the computer processor when discussing the recognition mechanism

for the activation of other buttons on the device. The specification in column 2, lines 38-44:

states:

> The buttons **18-26** are connected to control switch buffer/amplifier circuitry **34** which produces electrical signals representative of whether the buttons are asserted. The electrical signals are transmitted to the computer over cable **28** to notify the computer that one or more keys have been asserted.

The microphone recognition mechanism is the term applied to the computer in the

particular case of recognizing the activation of the voice data and voice command buttons.

I.   Speech Recognition Mechanism

Claim 2 of the '883 patent introduces the term "speech recognition mechanism." Claim 2

states:

> The data entry system of claim 1 wherein said processing system further comprises a speech recognition mechanism which generates text data representative of a microphone signal designated as data by said interpretation mechanism.

Plaintiff defines speech recognition mechanism as "computer hardware and/or software

that analyzes a voice input and generates text representative of the words contained in the voice

input." Speech recognition programs were old when the patents-in-suit were filed, and examples

of them are cited in the patent specification. It is not merely a function, but a product one could

by in a software store.

The claim element is not a means-plus-function element as contended by defendant. The

element does not use the "means for" language. Moreover, speech recognition engines are

structural as they refer to known, software-computer combinations and not merely a function.

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